COAST GUARD BULLETIN

ISSUED MONTHLY

Volume 2 WASHINGTON, DECEMBER 1942 [1] Number 6

CONGRESS AUTHORIZES THE ESTABLISHMENT OF A WOMEN'S RESERVE

A Women's Reserve for the Coast Guard, to consist for the present of approximately 4,000 members, has been authorized by Act of Congress signed by President Roosevelt on November 23. The purpose of the Women's Reserve is to release for active sea duty officers and enlisted men now assigned to shore duty.

The new organization will be patterned after the Women's Reserve of the Navy. Those commissioned or enlisted for duty with the Coast Guard will receive their basic training at schools already selected by the Navy for the training of its WAVES. The Coast Guard uniforms will also be identical with the comparable ranks and ratings in the WAVES, except that Coast Guard insignia will adorn hats, lapels, and sleeves.

SPARS is the title which has been adopted as the short name of the members of the Coast Guard Women's Reserve. The first four letters are initials of the words "Semper Paratus—Always Ready", motto of the Coast Guard.

Miss Dorothy C. Stratton, dean of women of Purdue University, on leave of absence to serve as lieutenant of the WAVES, has been transferred to the Coast Guard and named director of the SPARS with the rank of lieutenant commander. Before coming to the Coast Guard, Lieut. Comdr. Stratton served at the training unit for the WAVES at the University of Wisconsin.

Regulations governing conditions of appointment and enlistment and future service of Women's Reserve members are now in preparation, and are being patterned closely after those of the Navy's Women's Reserve. SPARS may serve only within continental United States.

In order to be considered for appointments as officers in the SPARS, applicants must be under 50 years of age and not less than 20 years of age.

If the applicant is not a native-born American, she must have naturalization papers for herself or her parents.

Women with children less than 18 years of age will not be considered.

Women, in order to qualify, must have a college degree. Two years of college work and at least 2 years of acceptable business or professional experience may be substituted.

Married women may apply provided their husbands are not in the Coast Guard. Unmarried women must agree not to marry until after they have finished their period of training. After training they may marry a civilian or a service man not in the Coast Guard.

Applicants must furnish three character references.

To help in determining the amount of experience candidates may have each must submit a record of her occupations since leaving school.

The requirements for enlistment in the Women's Reserve are the same as for the officers except in the age, educational, and physical requirements.

Women wishing to enlist in the SPARS must be under 36 years of age and not less than 20 years of age.

They must be graduates of high school or business school. If they are not graduates, they must have had the equivalent in business courses and experience.

All applicants are given a thorough physical examination. They must be not less than 5 feet in height and not less than 95 pounds in weight.

[1] Published with the approval of the Director of the Budget.

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EMERGENCY REGULATIONS FOR SHIPS ARE BROUGHT UP TO DATE

The regulations applicable to merchant vessels and shipping during the emergency have been brought up to date and are published on page 65. These emergency regulations deal with material and personnel matters concerning inspected merchant vessels and are supplemental or additional to the various classes of general rules and regulations, including the regulations for tank vessels.

These emergency regulations have been published in this one issue for ready reference so that all interested parties will become familiar with the requirements for merchant vessels which must be complied with during the emergency.

SHIP LAUNCHINGS INCREASE FLEET SERVICING NAVIGATIONAL AIDS

Nine new cutters have been launched for the Coast Guard during the past 2 months, and will soon take their places in the expanding Coast Guard fleet. The new vessels include six tender class cutters 180 feet in length, two tender class cutters 110 feet in length, and one western river type vessel 114 feet in length, specially designed for ice-breaking work.

Three of the 180-foot cutters were launched at the yards of the Marine Iron & Shipbuilding Co. in Duluth, Minn. These vessels are: The *Conifer*, launched on October 3, and sponsored by Miss Barbara Shanley, daughter of Capt. Thomas A. Shanley, District Coast Guard Officer at Chicago; the *Mesquite*, launched on November 14, and sponsored by Mrs. Gaines A. Tyler, wife of Lt. Comdr. Tyler, a Coast Guard inspector at that yard; and the *Buttonwood*, launched on November 28, and sponsored by Miss Florence Rizzuto, sister of Mrs. Russell R. Waesche, wife of the Commandant of the Coast Guard.

Duluth, Minn., was also the scene of additional launchings when three 180-foot tender-class cutters were launched at the yards of the Zenith Dredge Co. The cutters were: The *Sorrel*, launched on September 28, and sponsored by Mrs. Charles A. Johnson, who was selected by the contractor; the *Madrona*, launched on November 11, and sponsored by Mrs. Stephen S. Yeandle, wife of Captain Yeandle, District Coast Guard Officer at St. Louis; and the *Tupelo*, launched on November 28, and sponsored by Miss Nancy Hay, daughter of Comdr. Beckwith Jordon, Chief of Staff at the District Coast Guard Office in St. Louis.

The two 110-foot tender-class cutters, the *Cosmos* and *Barberry*, were launched at the plant of the Dubuque Boat & Boiler Co., Dubuque, Iowa. The *Cosmos* was launched on November 11, and was sponsored by Mrs. Olaf C. Olsen, wife of Lieutenant Olsen, a Coast Guard Inspector at the shipyard. The *Barberry* was launched on November 14, and was sponsored by Miss Louise Landgraf who was selected by the contractor.

The 114-foot river cutter *Fern* was launched at the yard of Petersen & Haecker, Ltd., in Blair, Nebr., on November 6. The sponsor for this vessel was Mrs. Edward A. Stanton, wife of Lieutenant Stanton, a Coast Guard inspector at the yard.

All of the newly launched vessels are normally employed in the maintainence of marine aids to navigation. However, they are equipped to perform many of the miscellaneous duties of the Coast Guard. The river type cutter *Fern* has been specially designed so that a huge ice plow can be attached to it for ice breaking purposes. It will be used on the Illinois River.

OFFICERS OF FORMER PHILIPPINE ARMY COMMISSIONED IN U. S. COAST GUARD

Four men, who formerly served as officers in the army of the Philippine Commonwealth, have been commissioned and inducted into the United States Coast Guard Reserve with the oath being administered by Vice Admiral Russell R. Waesche, Commandant.

The officers, all of whom recently completed the course offered at the U. S. Navy Submarine Chaser School, Miami, Fla., and who have been certified as qualified to command patrol vessels, are: Lt. Comdr. Carmelo Lopez Manzano, Lt. Benjamin Ayesa, Lt. (J. G.) Juan B. Lacson, and Ensign Conrado Aguado.

Lieutenant Commander Manzano and Lieutenant Ayesa hold all-oceans, all-tonnages merchant marine licenses; Lieutenant (J. G.) Lacson has had a master's ticket since 1930, while Ensign Aguado has a chief mate's license.

Lieutenant Commander Manzano, who was a major in the Philippine Army and who served as aide de camp to Maj. Gen. B. J. Waldes, has had 14 years of seagoing experience. His

last vessel was destroyed in an attempt to run the Japanese blockade of Bataan. Born in 1904, he attended the De La Salle School and the Philippine Nautical School, graduating from the latter in 1924. He had command of an ocean going vessel for 4 years.

Lieutenant Ayesa was born in Barcelona, Spain, in 1904, and became a naturalized Philippine citizen in 1937. He formerly was a captain of the offshore patrol of the Philippine Army, and has had 21 years experience at sea.

Also a captain of the Philippine Army's off-shore patrol, Lieutenant (J. G.) Lacson, was born in 1898, has had 20 years experience at sea. During 1940 and 1941 he was a second and a chief officer of the Philippine Coast Guard.

Ensign Aguado, born in 1913, attended San Beda College and the Philippine Nautical School. He formerly was a second lieutenant of the Philippine Army's off-shore patrol and has had 10 years experience at sea.

ACTION IN SOLOMONS BRINGS SILVER STAR MEDALS TO COAST GUARDSMEN

Silver Star Medals were awarded recently to four Coast Guardsmen by Admiral Chester W. Nimitz, Commander in Chief of the Pacific Fleet, for gallantry in action during the landing of Marine forces in the Solomon Islands. The men, who in addition were advanced in rating, are: Glen Livingston Harris of Allenhurst, N. J., advanced from surfman to machinist's mate second class; Harold Christian Miller, of Detroit, Mich., advanced from boatswain's mate second class to boatswain's mate first class; William Allerton Sparling, of Sault Ste. Marie, Mich., advanced from coxswain to boatswain's mate second class; and Daniel James Tarr of Chincoteague, Va., advanced from surfman to boatswain's mate second class.

The citation accompanying the award of each man states:

"For distinguishing himself conspicuously by gallantry and intrepidity in action during the landing on Tulagi Island. His boat with seven others constituting the first assault wave, he landed his embarked troops and then, during that day and the following 2 days, made repeated trips, in spite of heavy enemy fire, to land equipment and supplies. At a later date he made a landing against a Japanese force on Guadalcanal Island, thereby contributing materially to successful operations. He conducted himself throughout in keeping with the finest traditions of the United States Coast Guard."

NINETY DAY ACADEMY COURSE IS NOW AVAILABLE TO ENLISTED MEN

The special 90-day Reserve Officers Training Course at the Coast Guard Academy which leads to a commssion as ensign in the Coast Guard Reserve, is now open to enlisted men of the regular Coast Guard and the Coast Guard Reserve regardless of their rating, under a new plan recently adopted by the Service.

To qualify for this course, an enlisted man must have served for at least 3 months in off-shore or antisubmarine patrol vessels of the Coast Guard or Navy, or on Coast Guard cutters on the Great Lakes. Duty aboard harbor patrol vessels will not be sufficient to qualify. In addition, candidates must be between the ages of 20 and 29 years, inclusive, in good physical condition and at least 64 inches in height. Educational qualifications will be determined through standard intelligence tests which will be given all acceptable applicants.

New classes of approximately 250 candidates enter upon the Reserve Officers Training Course at the Academy each month, and headquarters hopes that a portion of all future classes will come from the enlisted ranks. At the present time the classes are essentially for officers in the deck department, but a separate engineering course is now planned and will be started soon.

PHILIPPINE COMMONWEALTH PRESENTS PATROL CRAFT TO COAST GUARD

The Philippine Commonwealth has presented an antisubmarine patrol boat to the United States Coast Guard. Transfer of the vessel, which was formerly the yacht of Resident Commissioner of the Philippines, J. M. Elizalde, was made in an exchange of letters between Manuel L. Quezon, President of the Commonwealth of the Philippines, and President Roosevelt.

President Quezon wrote:

"My Dear Mr. PRESIDENT: On behalf of the Government of the Commonwealth of the Philippines, it is my great pleasure to present the *Bataan* to the Government of the United States. I beg you to accept this vessel as a token

of undying Filipino determination to fight under your command until the war is won.

The Filipino officers and crew who will man this vessel are now regular members of the United States Coast Guard Reserve. They, and this Coast Guard patrol boat, represent the desire of every one of the 17 million Filipinos, whether under enemy domination or on free soil, to go into action again in the fight for freedom.

With assurance of my highest personal esteem and admiration, I am

Very sincerely yours,

MANUEL L. QUEZON"

MARKED IMPROVEMENTS MADE IN COAST GUARD'S PORT SECURITY PROGRAM

Since the tour of inspection made by Secretary of the Navy Frank Knox, accompanied by Vice Admiral Russell R. Waesche, Commandant of the Coast Guard, early this year, improvements in the program for the security of United States ports have been planned and put into operation in recent months.

In addition to the measures taken on a national scale, special steps have been taken for safeguarding the port of New York. Regulations governing the movements and anchorage of private vessels have been completely recodified and reissued to close all loopholes in the former regulations and to provide greater clarity and ease in their use.

The regulations for the handling of explosives also have been revised in order to coincide with the needs for handling large quantities of military explosives necessary for the prosecution of the war without jeopardizing the safety of persons and property in areas adjacent to the loading terminals.

Organization of a civilian voluntary protective regiment for the protection of port facilities has been proven feasible, and steps are being taken to institute such a plan.

Coordination and liaison has been established between the Coast Guard, the Navy and the War Departments, the Office of Civilian Defense, the Office of the Petroleum Coordinator, and other agencies to insure the protection of all waterfront facilities without duplication of protective efforts.

The number of Captains of the Port has been increased from 60 to 90, while a large number of Assistant Captains of the Port have been appointed in places of lesser importance. Every United States port important to the war effort now has a Captain of the Port.

More than 1,800 patrol boats have been assigned to port security duty, while the enlisted personnel assigned to port protection has been increased to more than 19,000. A large number of these men have had previous training as policemen and firemen. A Coast Guard Training Station for the instruction of such personnel has been established at Fort McHenry, Md.

Extensive steps have been taken to coordinate the prevention and combating of waterfront fires. More than 100 fireboats already have been assigned to various ports, while 150 more are to be delivered shortly. Local authorities have been encouraged to enact fire prevention ordnances and excellent cooperation has been received in this undertaking. Aid of underwriters associations and similar organizations has been enlisted to assist in making fire-prevention surveys and recommendations.

A procedure has been developed and put into operation for the removal from vessels and water-front facilities of persons whose presence thereon would be dangerous to the United States' war efforts.

A Port Security Coordinating Committee composed of governmental and private agencies concerned with shipping and water-front facilities has been placed in operation in the Port of New York.

Coast Guard fire-fighting forces have been coordinated with those of the New York City fire department. A port security force of approximately 2,000 men has been formed to assist in the protection of water-front facilities, and a voluntary flotilla of over 125 small craft has been assigned to patrol duties in New York Harbor.

SINKING OF CAMPBELL AN ERROR

The Coast Guard cutters referred to in the November issue of the COAST GUARD BULLETIN as having been sunk on previous months should have been the cutters *Alexander Hamilton* and *Acacia* and not the *Campbell* and *Acacia*.

MERCHANT MARINE INSPECTION ACTIVITIES

TITLE 46—SHIPPING

Chapter II—Coast Guard: Inspection and Navigation

SUBCHAPTER O—REGULATIONS APPLICABLE TO CERTAIN VESSELS AND SHIPPING DURING EMERGENCY

The regulations contained herein are supplemental or additional to the various classes of the General Rules and Regulations, including the regulations for tank vessels. For subjects not covered by these regulations, the existing regulations continue to prevail. These regulations include all amendments published in the Federal Register through November 21, 1942.

PART 150—INSPECTION AND CERTIFICATION OF VESSELS DOCUMENTED UNDER ACT OF JUNE 6, 1941

Sec.
150.1 Inspecton laws applied—Inspection and certification.
150.2 Authority to proceed without certification.
150.3 Administration.

150.1 *Inspection laws applied—Inspection and certification.* The following existing laws covering the inspection of steam vessels are hereby made applicable to vessels (other than public vessels not engaged in trade) documented under the act of June 6, 1941, which navigate any waters of the United States which are common highways of commerce or open to general competitive navigation:

(*a*) Sec. 4403, R. S., to the extent that it requires the Commandant of the Coast Guard to produce a correct and uniform administration of the inspection laws.

(*b*) Sec. 4472, R. S., as amended.

(*c*) Sec. 4463, R. S., as amended.

(*d*) Sec. 4450, R. S., as amended.

(*e*) Act of June 10, 1918, sec. 1 (46 U. S. C. 431).

(*f*) Sec. 4421, R. S., as amended, upon the following conditions:

(1) Each such vessel shall be inspected annually by the Merchant Marine Inspector in Charge and if in his opinion the vessel is in a safe and seaworthy condition and can be navgated with safety to life on the routes where she is to be operated and is in proper condition to carry the type and character of cargo for which she is to be employed a certificate of inspection shall be issued to the vessel.

(2) In making the inspection the Merchant Marine Inspector in Charge may require such tests and examinations to be conducted as may be necessary to determine the condition of each such vessel, her hull, machinery, piping, boilers, steering gear, lifesaving equipment, fire-fighting, and general equipment.

(3) Reports of tests and inspections made by surveyors of the American Bureau of Shipping or other recognized classification societies may, in the judgment of the Merchant Marine Inspector in Charge, be accepted as evidence of the condition of the hull, boilers, or machinery.

(4) The Merchant Marine Inspector in Charge may, if he deems it necessary, place the vessel in motion to determine that the propulsion machinery, both main and auxiliary, is functioning properly and that its operation is understood by the crew by which the vessel is manned.

(5) Certificates of inspection shall be issued to such vessels on Form 841 by amending the certifying clause with the addition of the following wording: "as applied to vessels documented under the act of June 6, 1941," so that the certifying clause reads as follows:

"I further certify that the said vessel at the date hereof is, in all things, in conformity with the laws governing the Coast Guard and the Rules and Regu-

lations of the Commandant, as applied to vessels documented under the Act of June 6, 1941."

150.2 *Authority to proceed without certification.* A Supervising Merchant Marine Inspector may permit any such vessel to proceed without a certificate of inspection or with an expired certificate of inspecton, to another port if in his judgment it can be done with safety.

150.3 *Administration.* In the administration of the foregoing, due consideraton shall be given to the primary purpose of transporting commodities essential to the national defense.

PART 152—MARINE ENGINEERING; REGULATIONS DURING EMERGENCY

Sec.
152.1 Definition of terms.
152.2 Degaussing of ocean and coastwise vessels of 2,000 gross tons or over.
152.3 Main engine and pumps, remote control.
152.4 Administration.

152.1 *Definition of terms.* Certain terms used in the regulations of this part are defined as follows:

(*a*) *Emergency.* The term "emergency" means the Unlimited National Emergency proclaimed by the President on May 27, 1941.

152.2 *Degaussing of ocean and coastwise vessels of 2,000 gross tons or over.* Effective immediately, every vessel of the United States of 2,000 gross tons or over mentioned in §§ 33.2–1, 33.2–3, 59.1, 60.1, or 63.1a, of this chapter shall be degaussed in accordance with the requirements of, and at such time as may be fixed by the War Shipping Administration.

152.3 *Main engine and pumps, remote control.* All mechanically propelled ocean and coastwise vessels are to be provided with a remote control arrangement for promptly stopping the engines. In the case of reciprocating engines and steam turbines this is to be accomplished either by fitting a remote throttle control or by providing prompt and efficient means of simultaneously shutting the stop valve of each main boiler. On Diesel vessels a shut-off on the fuel line at the engine is to be utilized. These controls are to be located on the upper deck, preferably on the boat deck and in such position that they may be readily operated in an emergency.

On vessels propelled by steam turbines a vacuum breaker, which can be operated from the remote control position, shall be provided in order to stop the turbines promptly.

Pumps, particularly main circulating pumps, which discharge above the light load line, are to be fitted with remote control valves for shutting them down. These controls are to be located adjacent to the remote control for the main engine.

152.4 *Administration.* If compliance with any of the requirements set forth in this part is shown to be unreasonable or impracticable, exemption may be granted upon satisfactory presentation of the facts and circumstances. Application for any such exemption should be made to the nearest District Office. Headquarters shall be informed when exemptions have been granted, together with reasons therefor.

In all cases, however, where the materials or equipments necessitated by these requirements are not available, it shall not be necessary to apply for formal exemption as above. While it is not intended that vessels be delayed for noncompliance, it is expected that diligent efforts will be made to meet these requirements as rapidly as is possible.

PART 153—BOATS, RAFTS, AND LIFESAVING APPLIANCES; REGULATIONS DURING EMERGENCY

Sec.
153.1 Definition of terms.
153.2 Additional lifesaving equipment on ocean and coastwise vessels.
153.3 Lifeboats on ocean and coastwise vessels.
153.3a Motor lifeboats.
153.4 Construction of life rafts.
153.5 Construction of buoyant apparatus.
153.6 Additional equipment for lifeboats on ocean and coastwise vessels.
153.7 Additional equipment for life rafts on ocean and coastwise vessels.
153.8 Removal of vessel's name and home port.
153.9 Construction of ring life buoys.
153.10 Construction of life preservers.
153.11 Life preserver light.
153.12 Lifesaving suits.
153.13 Emergency flashlights.
153.14 Whistles and jackknives.
153.14a Abandon-ship kit.

153.15 Lifeboat fall reels and lowering bitts.
153.15a Lifeboat fenders.
153.16 Life lines rigged from davit span.
153.17 Lifesaving nets.
153.18 Lifeboat and fire drills.
153.19 Blackout enforcement.
153.19a Luminous marking.
153.20 Emergency lights.
153.21 Emergency escape ladders.
153.22 Removal of calcium water lights.
153.23 Emergency radio installation.
153.24 Watertight case for distress lights.
153.25 Life floats.
153.26 Security inspection.
153.27 Cargo: Loading and stowage.
153.28 Administration.

153.1 *Definition of terms.* Certain terms used in the regulations of this part are defined as follows:

(*a*) *Emergency.* The term "emergency" means the Unlimited National Emergency proclaimed by the President on May 27, 1941.

153.2 *Additional lifesaving equipment on ocean and coastwise vessels.* Ocean and coastwise vessels shall, during the emergency, be provided with additional lifesaving appliances as follows:

(*a*) *Passenger vessels*—(1) *Life rafts.* Passenger vessels shall be equipped with a sufficient number of approved life rafts to accommodate at least 25 percent of all persons on board, in addition to the lifeboats and buoyant apparatus required by Subchapter G of this chapter. Rafts shall be of not less than 15-person capacity each.

(2) *Life preservers.* Passenger vessels shall, in addition to having on board a life preserver for each person allowed to be carried, be provided with life preservers stowed on the boat deck for at least 25 percent of the total number of persons. These life preservers shall be stowed in chests so as to be readily accessible and in a manner as to float free of the vessel. The covers of the chest shall be of the "lift-off" type to insure release of the life preservers.

(*b*) *Cargo vessels and tank ships*—(1) *Lifeboats and rafts.* Cargo vessels and tank ships shall carry a sufficient number of lifeboats on each side to accommodate all persons on board: *Provided,* That on ocean and coastwise tank ships of 3,000 gross tons and over, having superstructure amidships, and propelling machinery aft, the lifeboat capacity required by part 33 of this chapter shall be provided by at least four lifeboats, one on each side in way of the after accommodations and one on each side in way of amidships accommodations: *Provided, further,* That where the number of persons permitted by the certificate of inspection is augmented by the addition of Naval personnel for the purpose of protection or observation, additional lifeboat capacity for such personnel will not be required. Cargo vessels and tank ships shall, in addition to the lifeboatage required, be equipped with sufficient approved life rafts to accommodate all persons on board. Rafts shall not have a greater capacity than 20 persons nor less capacity than 15 persons. The minimum number of rafts to be furnished such vessels certificated for routes exceeding 200 miles offshore shall be four.

(2) *Life preservers.* Cargo vessels and tank ships shall, in addition to having a life preserver for each person allowed to be carried, be provided with life preservers stowed on the boat deck for at least 25 percent of the total number of persons. These life preservers shall be stowed in chests so as to be readily accessible and in a manner as to float free of the vessel. The covers of the chests shall be of the "lift-off" type to insure release of the life preservers.

(3) *Ladders.* Cargo vessels and tank ships shall be provided with suitable ladders to enable persons to descend to lifeboats and rafts, one ladder to be provided for each set of boat davits. These ladders shall be kept ready and convenient for use on the boat deck and shall reach to the vessel's light load water line.

(*c*) *Towing vessels, manned barges, and miscellaneous craft*—(1) *Life rafts.* Towing vessels, manned barges, and miscellaneous craft shall carry sufficient lifeboats to accommodate all persons on board. In addition, approved rafts to accommodate all persons on board shall be carried: *Provided,* That where lack of space or operating conditions prevent the proper stowage of life rafts, approved life floats may be substituted. Rafts shall not have a greater capacity than 15 persons nor a less capacity than 5 persons.

(2) *Life preservers.* Towing vessels, manned barges, and miscellaneous craft shall, in addition to having a life preserver for each person allowed to be carried, be provided with life preservers stowed on the boat deck, or uppermost deck, for at least 25 percent of the total number of persons. These life preservers shall be

stowed in chests so as to be readily accessible and in a manner as to float free of the vessel. The covers of the chests shall be of the "lift-off" type to insure release of the life preservers.

153.3 *Lifeboats on ocean and coastwise vessels.* During the emergency, lifeboats on all vessels operating on ocean or coastwise waters shall comply with the following additional requirements:

(*a*) *Grab rails.* Grab rails or other suitable means shall be substantially attached to each lifeboat, below the turn of the bilge, where practicable. Grab rails shall extend approximately two-thirds of the length of the lifeboat. Where wires or manila ropes are attached to the lifeboats in lieu of grab rails, they shall be so arranged that they may be detached when the lifeboat is waterborne.

(*b*) *Readiness for lowering.* Masters shall, with due regard to safety, cause all lifeboats attached to davits other than gravity davits to be properly griped in the outboard position as will allow immediate lowering in case of emergency. On all vessels guys are to be rigged from the davit heads when the boats are carried in the outboard position.

(*c*) *Cubic capacity of lifeboats.* On all mechanically propelled ocean and coastwise cargo and tank vessels which are certificated for the first time after January 1, 1943, the cubic carrying capacity of the lifeboats provided shall be calculated on the basis of 15 cubic feet per person. This rated carrying capacity shall be plainly marked on at least 2 of the thwarts. On such lifeboats the marking of the name plate with rated carrying capacity in persons, shall be omitted.

(1) *Air tanks of lifeboats.* The air tank capacity in such lifeboats shall equal at least one-tenth of the total volume of the lifeboat in cubic feet and in addition sufficient air tank capacity shall be provided to float the boat (including its equipment) when filled with water.

(2) *Provisions and water.* In all cases such lifeboats shall be provided with provisions and water as required by these regulations for the number of persons which the boat will accommodate on the basis of 10 cubic feet per person.

153.3a *Motor lifeboats.* On all ocean and coastwise ships of 3,000 gross tons and over which are certificated for the first time after January 1, 1943, one of the lifeboats on each side shall be motor-propelled.

(*a*) *Equipment.* In addition to being provided with all equipment required for lifeboats, such motor lifeboats shall carry at least two 1-quart size fire extinguishers of the carbon tetrachloride type. Motor lifeboats carried on passenger vessels in compliance with § 59.5 of this chapter shall in all cases be fitted with a radio installation and a searchlight in accordance with § 59.11a of this chapter.

(*b*) *Motor and accessories.* The engine for motor-propelled lifeboats shall be of a reliable type, permanently installed inside the lifeboats.

The power of motor lifeboats shall be such that the speed through the water, in smooth water, shall be at least 6 knots when fully loaded. Under these conditions, fuel capacity sufficient for 24 hours' continuous operation shall be provided.

Suitable provision shall be made for going astern.

The motor shall be protected by a weatherproof enclosure. The top of the enclosure shall be constructed so that it may be removed when necessary and shall be fitted with a ventilator of a water-protector type.

Fittings, pipes, and connections shall be of high standard and good workmanship and installed in accordance with good practice. There shall be a strainer between carburetor and fuel tank and an efficient hand starter.

153.4 *Construction of life rafts.* During the emergency, life rafts on all vessels operating on ocean or coastwise waters shall comply with the following additional requirements:

(*a*) *Stowage.* Life rafts shall be stowed on skids, launching ways or other alternative means to provide quick release of the rafts directly into the water and arranged so that they would have the best chance of floating free of the ship if there is no time to launch them.

153.5 *Construction of buoyant apparatus.* During the emergency, the following details of construction of buoyant apparatus are provided for:

(*a*) *Air tanks.* Ferrous metals, properly galvanized of a thickness not less than No. 20 B. W. G. for tanks of 15 cubic feet capacity or less, and a thickness of not less than No. 18 B. W. G. for tanks of over 15 cubic feet capacity may be permitted on air tanks constructed during emergency: *Provided*, That in cases where galvanized iron tanks are used under the emergency provision, the name plate shall show the notation "Gal. air tanks."

153.6 *Additional equipment for lifeboats on ocean and coastwise vessels.* The following additional equipment shall, during the emergency, be provided:

(*a*) *Bilge pump.* Lifeboats constructed on or after January 1, 1943, shall be equipped with an approved semirotary wing type or equally suitable and efficient bilge pump permanently affixed in a suitable position in the boat. The pump shall be of a type not easily deranged, the materials used in its construction shall be of a character not readily deteriorated by the action of salt water, and it shall be so constructed as to be readily disassembled for repairs. A suitable foot valve shall be located on the suction side of the pump and the suction opening shall have a cross-sectional area of not less than 0.7854 square inch. The pump shall be located well down in the center line of the boat and be fitted with a flexible discharge hose at least 6 feet in length and having a cross-sectional area of opening not less than that of the suction opening.

(1) Lifeboats built prior to January 1, 1943, shall be provided with a pump of the type specified above or a good quality barrel bilge pump may be provided. The material of which the pump is manufactured shall be of a corrosion-resisting character. The barrel shall be at least 2 inches in diameter and fitted with a discharge hose at least 6 feet in length and not less than 1½ inches in diameter.

(2) All pump suctions shall be fitted with suitable strainers and provision shall be made for allowing the strainer to be cleaned.

(*b*) *Blankets.* At least six woolen blankets in waterproof covers.

(*c*) *Chart.* A current Hydrographic Office (U. S. Navy) Pilot Chart of the waters navigated, in a metal container (similar to a sounding tube case).

(*d*) *Drinking cups.* A total of three drinking cups, at least two of which shall be of the well-bucket type, consisting of a tubular bucket about 1 inch in diameter and 3 inches long, marked in one-half ounce graduations. A chain or lanyard shall be attached to bucket-type cups in order that they may be dropped into the drinking water tanks. Drinking cups shall be fabricated of rust-resisting material.

(*e*) *First-aid kit.* One first-aid kit consisting of the equipment as listed below, packed in a substantial metal or otherwise suitable container. The container shall be watertight when closed and of substantial construction, not easily damaged or rendered nonwatertight. It shall maintain its watertightness when submerged at least 1 foot deep in water maintained at approximately 70° F. for a period of 2 hours. Items of equipment in the first-aid kit provided for boats certified to carry 40 persons or less shall be as follows:

2 units, 1-inch adhesive compress, each containing 16 compresses.
1 unit, ammonia inhalant, 4 tubes, each 2 cc. per tube, and 4 drinking cups.
1 scissors, blunt.
1 unit, gauze compress, 24 by 72 inches.
2 units, 3 oz. tannic acid jelly in not less than 2 tubes (10 percent tannic acid with 5 percent sulphadiazine).
1 unit, 3 eye pads, adhesive strips, 3 tubes eye dressing not less than ⅛ oz. each.
1 unit, 3 vials of iodine, 10 cc. each.
1 unit, 4-inch bandage compress.
2 units, 4 each, 2-inch bandage compress.
1 unit, triangular bandage, 40 inches.
1 unit, gauze bandage, 4 inches by 6 yards.
2 units, containing tourniquet and forceps.
1 unit, splint-wire or equivalent.
1 dozen safety pins.

Where one unit is specified above, it shall be contained in a single carton of the dimensions set forth below. Where two units are specified, they shall be contained in two single cartons or one double carton of the dimensions set forth below:

	Length	Width	Depth
	Inches	*Inches*	*Inches*
Single carton	4	2⅛	5/8
Double carton	4	2⅛	1¼

(*f*) *Flashlight batteries.* Three extra 3-cell approved flashlight batteries in a waterproof package.

(*g*) *Canvas hood and side spray curtain.* A canvas hood and side spray curtain to provide shelter to the occupants of the boat. The hood and curtain shall be made of No. 8 yellow, waterproofed cotton duck. The canvas hood should extend from the stem to the mast, but not less than approximately one-third of the length of the lifeboat, and must be easy to rig.

The side spray curtain shall extend from the after side of the canvas hood to approximately the after thwart and shall extend about 12 inches above the gunwale. The side spray curtain may be held in place by means of rods installed in the rowlock sockets so as to be easily transferred from side to side according to the direction of the wind.

(*h*) *Lamp wicks.* Two lamp wicks in waterproof container.

(*i*) *Massage oil.* One gallon of oil of a type suitable for massaging the feet and legs.

(*j*) *Mast and sail.* In addition to the mast, sail, and rigging, a suitable jib and 30 fathoms of 15-thread manila line shall be provided. New sails for lifeboats, as well as replacements for existing sails, are to be red or chrome yellow in color for the purpose of increasing their visibility on the water and from the air.

(*k*) *Matches.* Two additional boxes of friction matches.

(*l*) *Painter.* The painter required by § 59.11 of this chapter shall be secured in the forward part of the boat with a strop eye and toggle so that it may be rigged as a sea painter and readily released from the boat. An additional painter, 15 fathoms of 2¼-inch manila, shall be secured to the stem and coiled in the boat ready for use.

(*m*) *Provisions.* The provisions consisting of hard bread or equivalent of approved emergency ration, shall be removed from the lifeboats and the following provisions shall be provided for each person the boat is certificated to carry:

(1) Fourteen ounces of biscuits known as "Type C" ration covered by U. S. Army specifications.[1]

(2) Fourteen ounces of pemmican covered by specifications for U. S. Navy Aircraft Emergency Ration Pemmican.

(3) Fourteen ounces of chocolate tablets in waterproof packages or containers, or an additional 14 ounces of biscuits "Type C" rations covered by U. S. Army specifications.

(4) Fourteen ounces of milk tablets in waterproof packages or containers.

(5) The provisions shall be stowed in airtight receptacles as heretofore.

(6) Equivalents in calorific value may be substituted for pemmican required by item (2) and the milk tablets required by item (4) or both, provided that the substitutes and packing are satisfactory for lifeboat use. Samples of proposed substitutes shall be submitted to the Commandant for approval.

(*n*) *Signal flag.* One yellow or bright orange bunting flag (4′ 6″ x 8′) to be attached to a boathook pole, for tricing up to mast head to attract aircraft.

(*o*) *Tiller.* A suitable tiller to be fitted to the rudder.

(*p*) *Water containers*—(1) *Existing lifeboats.* Lifeboats constructed prior to October 15, 1942, shall carry a total of at least 10 quarts of water for each person the boat will, on the basis of 10 cubic feet per person, accommodate. An equal number of air tanks, from each side of the boat, may be removed and replaced with water containers, or the air tanks may be converted to water containers by reinforcing them where necessary and securely attaching a watertight fitting at the top of each tank through which the water may be extracted. No valves, cocks, etc., for drawing off the water shall be fitted. The drinking water previously required in existing boats may also be carried in these side water containers if capacity and other considerations make it deirable.

(2) *New lifeboats.* Lifeboats constructed after October 15, 1942, shall be provided with at least 10 quarts of fresh water for each person the boat will, on the basis of 10 cubic feet per person, accommodate. Drinking water shall be distributed and stowed as follows:

Four separate tanks preferably having approximately the same capacities equally distributed in inboard and outboard locations, as for example: One side tank port and one side tank starboard under the side benches plus two inboard tanks symmetrically located under the side benches, thwarts, or in the ends of the boat.

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[1] The size and number of biscuits in each package, as well as the general specifications for the package covering are as follows:

Each biscuit should measure approximately 2$^{9}/_{16}$ inches square by $^{5}/_{16}$ inch thick. The biscuits will be packed and heat-sealed in moisture- and grease-resisting wax glassine paper.

Drinking water tanks shall be substantially constructed of galvanized steel or equivalent corrosive-resistant material. When a tank has a capacity in excess of 25 gallons, a swash plate shall be fitted. A threaded nipple, approximately 2 inches inside diameter, is to be substantially attached to the top of the tank. The nipple is to project upward a sufficient distance to receive a corrosive-resistant screw cap knurled or otherwise provided with means so that it can be easily removed by hand. A reinforced opening not less than 5 inches in diameter fitted with a watertight cover shall be provided in the upper portion of each tank to permit internal examination and treatment. No spigot or cocks are to be fitted. A threaded metal drain plug and flange shall be provided in the bottom of each tank in such position that it is easily accessible for removal by wrench when the tank is in its stowed position in the boat. Water tanks shall be substantially supported away from the inside the boat and shall be readily removable for examination.

(*q*) *Wooden plugs.* Not less than 25 softwood plugs 3 inches long tapered from ¼- to ¾-inch diameter and contained in a canvas bag.

(*r*) *Signal pistol.* There is to be provided for each lifeboat, an approved signal pistol outfit consisting of a pistol with lanyard, and 12 approved parachute red signal cartridges, all contained in a watertight metal case properly marked.

(*s*) *Fishing kit.* On every ocean vessel of over 3,000 gross tons there shall be provided in each lifeboat one fishing kit consisting of the following equipment:

2 wire leaders, each with attachments for 2 fishing hooks, complete with swivels and lock-fast snaps.
18 salt water fish hooks (three No. 3, three No. 2, three No. 1, three 1/0, three 3/0, three 6/0).
200 feet of 100-pound test tarred fish line.
6 two-ounce lead sinkers.

The fish kit is to be packed in a substantial watertight metal container with screw top, sealed. All material shall be protected against or resistant to corrosion and of rugged construction.

(*t*) *Daytime distress signals.* Four self-contained smoke signals of an approved type. Such signals shall be positively and easily operated and under adverse weather conditions, shall produce, while floating on the surface of the water, smoke in sufficient intensity, volume, and color, as to be easily visible from aircraft.

(*u*) *Signaling mirrors.* Two stainless steel or other suitably polished metal mirrors having at least 20 square inches of reflecting surface on each side. The mirrors shall be heavily coated with a neutral preservative grease and wrapped in a waterproof container plainly marked "Signaling Mirrors."

153.7 *Additional equipment for life rafts on ocean and coastwise vessels.* The following additional equipment shall, during the emergency, be provided:

(*a*) *Bridles.* Two brides of 2¾-inch circumference manila rope attached to rings or shackles for lifting the raft. The painter shall be secured to the bight of one of the bridles so that it may be readily released.

(*b*) *Drinking cup.* One of the drinking cups required by § 59.52 of this chapter shall be suitably marked for measuring in one-half ounce sections for rationing water.

(*c*) *Provisions.* The provisions, consisting of hard bread or U. S. Army ration, shall be removed from the life rafts and the following provisions shall be provided for each person the raft is certificated to carry:

(1) Fourteen ounces of biscuits known as "Type C" ration covered by U. S. Army specifications.[1]

(2) Fourteen ounces of pemmican covered by specifications for U. S. Navy Aircraft Emergency Ration Pemmican.

(3) Fourteen ounces of chocolate tablets in waterproof packages or containers, or an additional fourteen ounces of biscuits "Type C" rations covered by U. S. Army specifications.

(4) Fourteen ounces of milk tablets in waterproof packages or containers.

(5) The provisions shall be stowed in airtight receptacles as heretofore.

(6) Equivalents in calorific value may be substituted for pemmican required by item (2) and the milk tablets required by item (4) or both, provided that the substitutes and packing are satisfactory for lifeboat use. Samples of proposed substitutes shall be submitted to the Commandant for approval.

[1] See footnote on p. 70.

(*d*) *Signal flag.* One yellow or bright orange bunting flag to be attached to a boathook pole to attract aircraft.

(*e*) *Water breakers.* Water breakers having a capacity equivalent to 2 quarts of water per person in addition to that required by § 59.52 of this chapter. (Total: 3 quarts per person.)

(*f*) *Wooden plugs.* Twenty-five softwood plugs 3 inches long, tapered from ¼- to ¾-inch diameter to plug bullet holes in air tanks.

(*g*) At least 15 fathoms of 12-thread manila.

(*h*) *First-aid kit.* One first-aid kit consisting of the equipment as listed below, packed in a substantial metal or otherwise suitable container. The container shall be watertight when closed and of substantial construction not easily damaged or rendered nonwatertight. It shall contain its watertightness when submerged at least 1 foot deep in water maintained at approximately 70° F. for a period of 2 hours. Items of equipment in the first-aid kit provided for life rafts shall be as follows:

1 unit, 2-inch bandage compress, 4 per unit.
1 unit, 1-inch adhesive compress, each containing 16 compresses.
1 unit, 3 eye pads, adhesive strips, 3 tubes eye dressing not less than ⅛ oz. each.
1 unit, ammonia inhalant, 4 tubes, each 2 cc. per tube, and 4 drinking cups.
1 unit, three vials of iodine, 10 cc. each.
2 units, containing tourniquet and forceps.
2 units, 3 oz. tannic acid jelly in not less than 2 tubes (10 percent tannic acid with 5 percent sulphadiazine).
1 unit, triangular bandage.

Where one unit is specified above, it shall be contained in a single carton of the dimensions set forth below. Where two units are specified, they shall be contained in two single cartons or one double carton of the dimensions set forth below:

	Length	Width	Depth
	Inches	*Inches*	*Inches*
Single carton	4	2⅛	5⅛
Double carton	4	2⅛	1¼

(*i*) *Signaling mirrors.* Two stainless steel or other suitably polished metal mirrors having at least 20 square inches of reflecting surface on each side. The mirrors shall be heavily coated with a neutral preservative grease and wrapped in a waterproof container plainly marked "Signaling Mirrors."

153.8 *Removal of vessel's name and home port.* (*a*) Vessels of 1,000 gross tons and over operating in coastal, intercoastal, or foreign trade are to have all exterior ship's identification and distinguishing marks removed, including the painting out of the name and hailing port. Portable name boards may be utilized when entering and departing from port as may be required.

(*b*) To effectuate the intent and purpose of paragraph (*a*) of this section, any part of Subchapter G, Ocean and Coastwise; General Rules and Regulations, and the appropriate rule relating to tank vessels, which are contrary thereto are hereby suspended for the period of the National Emergency.

153.9 *Construction of ring life buoys.* The following provisions are, during the emergency, applicable as alternative details of construction for ring life buoys to those provided by §§ 37.8–2, 59.56, 60.49, 76.53, 94.53, and 113.46 of this chapter:

(*a*) *Thread.* Thread used in the construction of ring life buoys may be of No. 10, six-cord, glazed finish, heavy cotton thread.

(*b*) *Number of segments for cork or balsa wood ring life buoys.* Cork or balsa wood ring life buoys, if constructed of 2 layers, may consist of not more than 6 segments in one layer and not more than 12 segments in the other layer (total 18 segments). Cork or balsa wood ring life buoys may be constructed of 3 layers, with not more than 5 segments in each outside layer and not more than 8 segments in the center layer (total 18 segments). The joints shall, in all cases, be properly staggered and, with the exception of the number of segments permitted above, all other requirements for standard ring life buoys, including the strength test, steaming test, fitting and gluing of segments, dowel-pinning, etc., shall be complied with.

153.10 *Construction of life preservers.* The following provisions are, during the emergency, applicable as alternative details of construction for life preservers to those provided in §§ 28.4–1 to 28.4–10, inclusive, of this chapter:

(*a*) *Balsa wood life preservers.* The balsa wood shall be of the genus Ochroma, thoroughly kiln-dried, and heat-treated to a moisture content not to exceed 5 percent and shall weigh not more than 10 pounds per cubic foot. It shall be sound, free from rot, dote, knots, pith, checks, and other defects. The block in any one pocket of the life preserver may be in not more than two pieces cut lengthwise with the grain, the smaller piece to be not less than 2 inches in width; or of not more than three pieces when glued together with waterproof glue. The weight of the finished balsa wood used in life preservers constructed under the provisions of § 28.4–5 of this chapter shall be not less than 2⅔ pounds nor more than 3¾ pounds.

(*b*) *New life preservers, covering.* New life preservers for use on ocean and coastwise vessels are to be covered with slate-colored drill which meets the requirements of Navy Department specification 27–D–1–b. The covering is to be rendered fire-resistive by treatment with approved fire-resistive substance.

153.11 *Life preserver light.* A life preserver light of an approved type shall be provided for each person on board ocean and coastwise vessels which, when actuated, shall show a red light. Such lights are to be attached to the individual life preserver when worn and are to be provided with means for readily transfering light to the lifesaving suit.

153.12 *Lifesaving suits.* Ocean and coastwise cargo and tank vessels of over 1,000 gross tons shall be provided with one approved lifesaving suit for each person on board.

153.13 *Emergency flashlights.* There shall be provided for each licensed officer on ocean and coastwise vessels an approved flashlight of the three-cell type suitable for signaling.

153.14 *Whistles and jackknives.* On all mechanically propelled ocean and coastwise vessels of over 1,000 gross tons, each person on board shall be provided with a police whistle and a sailor's jackknife of rugged construction, the blade of which shall be about 3 inches in length, with a sheep-foot point. The handle of the jackknife shall be fitted with a shackle for attaching a lanyard. Such knives and whistles shall be carried, when practicable, attached to life jackets or lifesaving suits.

153.14a *Abandon-ship kit.* All ocean and coastwise vessels of 3,000 gross tons and over shall carry at least two abandon-ship kits. The articles composing the abandon-ship kit, as listed below, shall be packed in a compact manner in a watertight container. Unless the container is of such nature that tampering will be readily evident, it shall be provided with a seal over the opening device. The kit shall be fitted with a shoulder-carrying strap or equivalent and, as packed, shall be sufficiently buoyant to float if dropped overboard. It shall be prominently marked and the predominant outside coloring of the case or container shall be orange or chrome yellow. The kit shall contain the following articles:

20 one-quarter grain syrettes of morphine.
48 one-half gram tablets of sulfadiazine in bottle.
10 Navy type, watertight packages containing 2½ grams of crystalline sulfanilamide.
4 ounces of approved oil cleansing solution in bottle having a screw cap.
5 four-ounce tubes of 5 percent sulfadiazine—tannic acid 10 percent jelly.
2 chemical heating pads of approved type.

There shall be included in each kit three printed copies of the following instructions:

DIRECTIONS FOR GIVING MORPHINE

1. Remove the transparent shield from end of syrette.
2. Holding the wire by the loop, push wire through the needle into the syrette, thus breaking the seal. Withdraw the wire.
3. Stick the needle under the skin of the arm or shoulder at an angle of 45° and squeeze syrette until tube is flat.
4. Withdraw the needle and throw the syrette away.
5. After the first dose additional injections may be given every 3 hours as long as necessary. First dose may be doubled if man is badly injured.

DIRECTIONS FOR USING SULFADIAZINE TABLETS

Each wounded or burned man should be given a single dose of eight of the sulfadiazine tablets. *No more sulfadiazine should be given.*

DIRECTIONS FOR SULFANILAMIDE POWDER

Open one of the packages of sulfanilamide and sprinkle the powder directly into the wound after which a compress and bandage may be applied. Sulfanilamide is a powerful and effective antiseptic and if property used will arrest and prevent infection which might otherwise prove fatal.

DIRECTIONS FOR USING OIL CLEANING SOLUTION

The solution is supplied for the purpose of removing fuel oil or like substance from the eyelids, nose, and lips. A pledget of cotton or a small piece of cloth dipped in the solution should be saturated and lightly rubbed over the skin surface until the oil is removed. To allay or prevent infection or irritation of the eyes from fuel oil, the eye ointment provided in the first-aid kit should be used.

DIRECTIONS FOR USING TANNIC ACID JELLY

Apply thick layer of jelly to gauze compress of sufficient size (obtained from first-aid kit) to completely cover the burned area. Lay this dressing on the burn and hold in place with a bandage loosely tied. On small burns the jelly may be used without a dressing, if desired. If, when it is necessary to change dressing, there is a tendency to stick, soak the compress in fresh or sea water to loosen it and prevent injury to the area.

DIRECTIONS FOR USING CHEMICAL HEATING PADS

Chemical heating pads are furnished for the purpose of supplying heat to the bodies of persons suffering from shock. Shock is a disturbance of the nervous and circulatory system which follows injury. The shock in itself may be more severe than the injury. Treatment of the shock is most important and the patient must, in all cases, be kept warm. A chemical heating pad should be utilized to apply heat locally to the abdomen and groin. Care should be taken not to burn the skin, especially of an unconscious person. The pad should be wrapped, if necessary, in cloths or clothing. For details of heating pad operation see directions on heating pad.

Abandon-ship kits shall be stowed in separate locations as designated by the master who shall instruct officers in charge of boats regarding understood arrangements as to securing a kit, should it become necessary to abandon the vessel.

153.15 *Lifeboat fall reels and lowering bitts.* On ocean and coastwise vessels, lifeboat fall reels of suitable type and capacity are to be fitted in such location as will give a direct lead to the lowering bitts. On all self-propelled vessels of over 1,000 gross tons where cleats are fitted in lieu of lowering bitts, cruciform bitts shall be provided where necessary and located in such position as will render lowering practicable.

153.15a *Lifeboat fenders.* All ocean and coastwise vessels of 1,000 gross tons and over shall have fitted over projections and openings in way of the lifeboats, between the boat deck and the light load line, substantial vertical skids constructed of wood or other suitable material to insure the unobstructed passage to the water of the lifeboats when lowered from the high side of the vessel when heavily listed.

Lifeboats on all ocean and coastwise vessels which are fitted with mechanical means for lowering are to be equipped with approved vertical fenders or skates on the inboard side extending from the gunwale well under the turn of the bilge, to facilitate launching on the high side of a listed vessel. Such fenders are to be sufficient in number to prevent damage to the boats while being lowered. Fenders or skates are to be designed so as to be light in weight and shall be so fitted as to be easily detached after the lifeboat is afloat. If wooden fenders are fitted, they shall be made of the best grade of oak or equivalent hard wood. Spaces in way of open decks below stowage positions of lifeboats into which boats might swing are to be fitted with strong horizontal bars between deck stanchions outboard in order that the boat may descend smoothly on the fenders or skates to the water.

153.16 *Life lines rigged from davit span.* On ocean and coastwise vessels, each lifeboat shall be provided with at least four life lines fitted to a span between the davit heads. Such life lines shall be knotted at approximately 3-foot intervals and of sufficient length to reach the water at the vessel's lightest seagoing draft.

153.17 *Lifesaving nets.* On all mechanically-propelled ocean and coastwise vessels of over 1,000 gross tons, there shall be provided for each set of davits a lifesaving net at least ten feet in width to reach from the rail to the light load line. Such nets are to have a mesh size of approximately 6 by 8 inches and are to be lashed in position for immediate use.

153.18 *Lifeboat and fire drills.* On all ocean and coastwise vessels the master or person in charge is responsible for instructing all on board in the use and purpose of the emergency equipment provided and for the conduct of frequent drills illustrating its use. The master and officers are to drill their crews until all on board are thoroughly familiar with the use and purpose of all safety equipment; are able to row and are familiar with the procedure for lowering boats, launching rafts and are proficient in quickly donning their lifesaving suits, if carried. In this connection a fire drill and a lifeboat drill with a boat in the water and boat crews exercised in rowing is to be held at every port of loading or discharge. When the master is satisfied that each member of the crew thoroughly understands his duties, he may then require that lifeboat drills including lowering of all boats and the exercise of each member of the crew in lowering the boats and rowing be held at longer intervals, but in no case longer than 30 days except where a vessel may be at sea for a longer period.

On vessels engaged in voyages of more than 3 days' duration a lifeboat muster and fire drill are to be held at sea not less than once in every four consecutive days and the master and officers are to instruct all of the crew with the exception of those who cannot be relieved of their immediate duties in the use of the various equipments which are on the vessel and fitted in the lifeboats. On all ships which carry persons in addition to the crew as passengers, such persons are, where practicable, to be required by the master to participate in lifeboat drills and receive instruction in the functioning and use of the various types of equipment.

153.19 *Blackout enforcement.* On ocean and coastwise vessels the master shall, when the vessel is at sea, maintain a complete blackout of his vessel from dusk until dawn except for the display of running lights in such areas and under such conditions as may be directed by competent naval authority.

153.19a *Luminous marking.* All ocean and coastwise cargo and tank ships of 3,000 gross tons and over and all ocean and coastwise passenger vessels shall be provided with interior marking in the accommodation, machinery, and working spaces of the vessel in the form of an approved luminous cloth or tape. Such marking shall be sufficient in character to clearly show in darkness the location of exit doors, ports, ladders, companionways, the location of emergency lights, control valves, if necessary, and similar vital locations or accessories.

153.20 *Emergency lights.* On mechanically propelled ocean and coastwise vessels of 1,000 gross tons or over there shall be provided self-contained, battery-operated emergency lights of an approved type, at least 12 in number, located throughout the vessel in readily accessible locations and plainly marked. These lights shall be portable and shall be readily removable.

153.21 *Emergency escape ladders.* On mechanically propelled ocean and coastwise vessels of over 1,000 gross tons at least two wire or chain ladders (one on each side) leading directly to the highest part of the engine room casing shall be provided and arranged in a way most likely to allow the escape of engine room personnel in the event of damage to the fixed ladders and gratings. On steam vessels a similar ladder shall be provided in the fire room running through the ventilator, if practicable. Such ladders are not to be hauled taut. They are to be lashed loosely at the floor plates.

153.22 *Removal of calcium water lights.* All calcium-type self-igniting water lights shall be removed from all ocean and coastwise tank ships, tank barges, and vessels using Diesel oil for fuel, and replaced by approved electric water lights.

153.23 *Emergency radio installation.* There shall be available and readily accessible (other than in a lifeboat) on board mechanically propelled ocean and coastwise vessels of over 1,000 gross tons for use in lifeboats at least one portable radio installation which complies with the requirements of the Federal Communications Commission or in lieu thereof there shall be located in at least one lifeboat

on each side of the vessel at all times while at sea a radio installation (in portable form or permanently installed) which complies with the requirements of the Federal Communications Commission for this purpose.

153.24 *Watertight case for distress lights.* The watertight case required for distress lights in lifeboats and life rafts may be of galvanized iron not less than No. 22 B. W. G. in thickness, or of equivalent corrosion-resistant material.

153.25 *Life floats.* On each mechanically propelled ocean and coastwise vessel of 1,000 gross tons and over, there shall be provided at least two approved doughnut-type life floats of at least 15-person capacity. These floats shall be stowed in such location that they may be launched directly overboard and so arranged that they would have the best chance of floating free of the ship if there is no time to launch them. An electric water light of an approved type shall be attached to each float by a suitable lanyard. At least two paddles are to be lashed to the sides of the float. The usual stowage for such floats is to be aft. One float may, however, be stowed in such other position as may be designated by the master.

153.26 *Security inspection.* The master is responsible for the proper performance and condition of all lifesaving and other safety equipment and in this connection he shall designate an officer or other person whose duty it shall be to inspect the vessel daily to determine that all such equipment is in good order and ready for immediate use. He shall report the findings of his daily inspection to the master who shall, if any deficiencies or other undesirable conditions are reported, take such action and issue such orders as may be necessary to place the equipment in proper condition, insofar as is practicable.

153.27 *Cargo: Loading and stowage.* If at any time prior to or after completion of the loading of any vessel in a United States port, the master shall deem that she is unseaworthy due to the stowage or nature of the cargo or both, he shall immediately so inform the District Office. An immediate examination of the vessel shall be made and, if necessary, the certificate of inspection shall be withdrawn until such time as the conditions found are satisfactorily corrected.

153.28 *Administration.* If compliance with any of the requirements set forth in this part is shown to be unreasonable or impracticable, exemption may be granted upon satisfactory presentation of the facts and circumstances. Application for any such exemption should be made to the nearest District Office. Headquarters shall be informed when exemptions have been granted, together with reasons therefor.

In all cases, however, where the materials or equipments necessitated by these requirements are not available, it shall not be necessary to apply for formal exemption as above. While it is not intended that vessels be delayed for noncompliance, it is expected that diligent efforts will be made to meet these requirements as rapidly as is possible.

PART 155—LICENSED OFFICERS AND CERTIFICATED MEN; REGULATIONS DURING EMERGENCY

Sec.

155.1 Definition of terms.
155.2 Master of ocean steam or motor vessels.
155.3 Chief mate of ocean steam or motor vessels.
155.4 Second mate of ocean steam or motor vessels.
155.5 Third mate of ocean steam or motor vessels.
155.6 Chief engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.
155.7 First assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.
155.8 Second assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.
155.9 Third assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.
155.11 Inland mates of Great Lakes steam or motor vessels.
155.12 Original licenses
155.14 Experience required for license as pilot, Great Lakes.
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155.23 Experence required for license as pilot, bays, sounds, and lakes other than the Great Lakes.
155.28 Chief engineer of motor vessels.
155.29 First assistant engineer of motor vessels.
155.30 Second assistant engineer of motor vessels.
155.31 Third assistant engineer of motor vessels.
155.32 Experience required for license as pilot, rivers.
155.34 Inland mates of rivers, steam or motor vessels.
155.35 Licenses to officers of vessels owned by the United States.

155.1 *Definition of terms.* Certain terms used in the regulations of this part are defined as follows:

(*a*) *Emergency.* The term "emergency" means the Unlimited National Emergency proclaimed by the President on May 27, 1941.

155.2 *Master of ocean steam or motor vessels.*[1] [2] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–1 and 62.30 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months	Steam or motor	Ocean or coastwise	Chief mate	Chief mate.
or				
1 year	do	do	Second mate	Do.
or				
3 months	do	Coastwise	Master coastwise	Master coastwise.
or				
6 months	Sail, 700 gross tons or over.	Ocean or coastwise	Master sail.	
or				
1 year	Steam or motor	Great Lakes	Master	Master Great Lakes.

155.3 *Chief mate of ocean steam or motor vessels.*[1] [2] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–3 and 62.36 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months	Steam or motor	Ocean or coastwise	Second mate	Second mate.
or				
1 year	do	do	Third mate	Do.
or				
6 months	do	Great Lakes	Master	Master Great Lakes.
or				
1 year	Steam or motor 1,000 gross tons or over.	Lakes, bays, and sounds.	do	Master lakes, bays and sounds.

155.4 *Second mate of ocean steam or motor vessels.*[1] [2] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–5 and 62.37 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months	Steam or motor	Ocean or coastwise	Third mate	Third mate.
or				
3 years	do	do	On deck, 2 years of such service as able seaman.	
or				
1 year	do	Ocean	Assistant (junior officer of the watch) to the officer in charge of the watch.	Do.
or				
Graduation		U. S. Naval Academy or U. S. Coast Guard Academy.		
or				
Graduation including 3 years.		Seamanship class of a state nautical school ship.		

[1] Commensurate with the experience of the applicant the inspector shall designate upon the license the limit of tonnage of vessel upon which he may act.

[2] In cases where the experience of an applicant for a license as a deck officer of ocean steam or motor vessels does not meet the specific requirements of this section, he may submit other service which, if considered satisfactory as a fair and reasonable equivalent by the Merchant Marine Inspector in Charge concerned, and approved by the Supervising Merchant Marine Inspector of the District, may be accepted in lieu of the service specified above.

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155.5 *Third mate of ocean steam or motor vessels.*[1][2] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–7 and 62.39 of this chapter:

(*a*) *Qualifying experience: General.*

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
18 months	Steam or motor	Ocean, coastwise, or Great Lakes.	On deck	Master or pilot Great Lakes, lakes, bays, and sounds.
or				
6 months	Steam or motor 150 gross tons or over, except ferry vessels.	Great Lakes, lakes, bays, and sounds.	Master or pilot.	
or				
2 years	Steam or motor	Great Lakes, lakes, bays, sounds, or rivers.	On deck	
plus				
6 months	do	Ocean or coastwise	do	
or				
3 years	Steam, motor, or sailing yachts over 100 gross tons.	Seagoing	do	
plus				
6 months	Steam or motor	Ocean or coastwise	do	
or				
2 years	do	Ocean or coastwise fisheries.	do	
plus				
6 months	do	Ocean or coastwise	do	
or				
2 years		U. S. Naval Academy or U. S. Coast Guard Academy, including one training cruise.		

(*b*) *Qualifying experience: United States merchant marine training systems.* (1) Eighteen months' service in the deck department of ocean, coastwise, or Great Lakes vessels. Time spent at a United States Maritime Service Training School for prospective officers, upon completion of the prescribed course of training, may be credited as a part of the required sea service, but not less than 14 months shall be served at sea; or,

(2) Deck cadets of the United States Merchant Marine Cadet Corps, administered by the War Shipping Administration, after having served a minimum of 16 months as such, at least 6 months of which shall have been served aboard a merchant or training vessel designated by the War Shipping Administration; or,

(3) Deck cadets of the United States Merchant Marine Cadet Corps, administered by the War Shipping Administration, on active duty as Midshipmen, MMR in the United States Navy, upon completion of 16 months' training of which at least 12 months shall have been served aboard merchant vessels designated by the War Shipping Administration, or naval vessel; or,

(4) Cadets at a state maritime academy governed by regulations of the War Shipping Administration after having served 6 months in a merchant or training vessel designated by the War Shipping Administration, together with 10 months' shore training.

Certification of satisfactory completion of course by district merchant marine training instructor in the cases of (2) and (3) and by the superintendent of state maritime academy in the case of (4) must be submitted with application.

[1] See footnote on p. 77.
[2] See footnote on p. 77.

155.6 *Chief engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.*[3 4 5 6] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–9, 36.4–9, 36.5–5, 36.6–5, 36.7–5, 62.50, 78.43, 96.42, and 115.40 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months or 1 year	Steam	Engine department of any waters.	First assistant engineer	First assistant engineer.
	do	do	Second assistant engineer	Do.
6 months[4] or 3 months	do	do	Licensed assistant engineer	Licensed assistant engineer.
	do	do	Qualified member of engine department.	Chief engineer motor.

[4] For license as chief engineer of steam vessels of not more than 1,000 horsepower.

155.7 *First assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.*[3 4 5] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–10, 36.4–9, 36.5–6, 36.6–6, 36.7–6, 62.51, 78.44, 96.43, and 115.41 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months or 1 year	Steam	Engine department of any waters.	Second assistant engineer	Second assistant engineer.
	do	do	Third assistant engineer	Do.
18 months[7] or 3 months	do	do	1 year as, or in a position equivalent to a qualified member of the engine department.	
	do	do	Qualified member of the engine department.	First assistant engineer motor.

[7] For license as first assistant engineer of steam vessels of not more than 1,000 horsepower. Time spent at the U. S. Maritime Service school for prospective officers, upon completion of the prescribed course of training, may be credited as part of the required service, but not less than 14 months shall be served in the engine department of steam vessels.

155.8 *Second assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.*[4 5] The following provisions are, during the emergency, applicable as alternative quali-

[3] Commensurate with the experience of the applicant the inspector shall designate upon the license the limit of horsepower of vessel and waters upon which he may act, and the Merchant Marine Inspector in Charge shall use "Merchant Vessels of the United States" as a guide in determining such horsepower.

[4] In cases where the experience of an applicant for a license as an engineer officer of steam or motor vessels does not meet the specific requirements of this section, he may submit other service which, if considered satisfactory as a fair and reasonable equivalent by the Merchant Marine Inspector in Charge concerned, and approved by the Supervising Merchant Marine Inspector of the District, may be accepted in lieu of the service specified above.

[5] Any applicant for raise of grade of license to chief engineer, or first assistant engineer, or second assistant engineer of steam or motor vessels may substitute service as engine-room watch electrician on electric-drive steam or motor vessels, such service to count one-half, but in no case shall such experience exceed three months of the required experience.

fying experience to that provided by §§ 36.3–11, 36.4–9, 36.5–7, 36.6–7, 36.7–7, 62.52, 78.45, 96.44, and 115.42 of this chapter.

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months	Steam	Engine department of any waters.	Third assistant engineer	Third assistant engineer.
or				
3 years	do	do	2 years as, or in a position equivalent to a qualified member of the engine department.	
or				
3 years [1]		Apprentice to machinist trade.		
plus		plus		
6 months	Steam	Engine department of any waters.	Any capacity	
or				
3 months	do	do	Qualified member of the engine department.	Second assistant engineer motor.
or				
Graduation		Mechanical, marine or electrical engineering from duly recognized school of technology.		
plus				
6 months	Steam	Engine department of any waters.	Any capacity	
or				
Graduation		U. S. Naval Academy or U. S. Coast Guard Academy.		
or				
Graduation including 2 years.		Engineering class of a State nautical school ship.		

[1] 6 months of such service shall be engaged in the construction, installation, or repair of marine engines.

155.9 *Third assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels.*[3][4] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–12, 36.4–9, 36.5–8, 36.6–8, 36.7–8, 62.53, 78.46, 96.45, and 115.43 of this chapter:

(*a*) *Qualifying experience: General.*

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity
18 months	Steam or motor	Engine department of any waters	1 year as, or in a position equivalent to a qualified member of the engine department.
or			
3 years [1]	Steam	Machinist trade apprentice	
plus	or	plus	
3 months	Motor	Engine department of any waters	Any capacity.
or			
2 years	Steam	Locomotive or stationary engineer	
plus	or	plus	
1 year	Motor	Engine department of any waters	Qualified member of the engine department.
or			
3 years	Steam	Completion of a prescribed course in mechanical, marine, or electrical engineering at a duly recognized school of technology.	
plus	or	plus	
3 months	Motor	Engine department of any waters	Any capacity.

[1] 3 months of which time shall have been engaged in the construction, installation, or repair of marine engines.

[3] See footnote on p. 79.
[4] See footnote on p. 79.

(*b*) ***Qualifying experience: United States merchant marine training systems.*** (1) Eighteen months' service in the engine department of a steam or motor vessel as, or in a position equivalent to, a qualified member of the engine department. Time spent at the United States Maritime Service Training School for prospective officers, upon completion of the prescribed course of training, may be credited as part of the required service, but not less than 14 months shall be served in the engine department of such vessels; or,

(2) Engineer cadets of the United States Merchant Marine Cadet Corps, administered by the War Shipping Administration, after having served a minimum of 16 months as such, at least 6 months of which shall have been served aboard a merchant or training vessel designated by the War Shipping Administration; or,

(3) Engineer cadets of the United States Merchant Marine Cadet Corps, on active duty as Midshipmen, MMR in the United States Navy, upon completion of 16 months' training, at least 12 months of which shall have been served aboard merchant vessels designated by the War Shipping Administration or naval vessels; or,

(4) Cadets at a State maritime academy, governed by regulations of the War Shipping Administration, after having served 6 months in a merchant or training vessel designated by the War Shipping Administration together with 10 months' shore training.

Certification of satisfactory completion of course by district merchant marine training instructor in the cases of (2) and (3) and by the superintendent of State maritime academy in case of (4).

155.11 ***Inland mates of Great Lakes steam or motor vessels.*** The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.5–2 and 78.33 of this chapter:

(*a*) Whenever any person presents himself for examination for license as mate of inland steamers, the Merchant Marine Inspector in Charge shall examine him as to his knowledge, experience, and skill in loading cargo and in handling and stowage of freight, his knowledge of the operation and handling of fire apparatus, the launching and handling of lifeboats, his knowledge of life preservers and the method of adjusting them, his ability to manage the crew and direct and advise the passengers in case of emergency, and his general familiarity with his duties in maintaining discipline and protecting the passengers, and if found qualified he shall grant him a license as such, but no such license shall be granted to any person who has not had at least 2 years' experience in the deck department of a steam vessel, sail vessel, motor vessel, or barge consort, 6 months of such service to have been in a steam or motor vessel.

155.12 ***Original licenses.*** The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.1–1, 62.1, 78.1, 96.1, and 115.1 of this chapter:

(*a*) Before an original license is granted to any person to act as master, mate, pilot, or engineer, he shall personally appear before some Merchant Marine Inspector in Charge for examination. Any person who has attained the age of 21 years and is qualified in all other respects shall be eligible for examination: *Provided*, That license as third mate, third assistant engineer, or second-class pilot may be granted to applicants who have reached the age of 19 years, and that license as second mate or second assistant engineer may be granted to applicants who have reached the age of 20 years and are qualified in all other respects: *Provided, further*, That no such license as second mate or second assistant engineer may be raised in grade before the holder thereof shall have reached the age of 21 years.

155.14 ***Experience required for license as pilot, Great Lakes.*** The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.5–3 and 78.36 of this chapter:

(*a*) No original license for pilot of any class shall be issued to any person who has not served at least 2½ years in the deck department of a steam vessel, motor vessel, or sail vessel, 1 year of which experience must have been obtained within the 3 years next preceding the date of application for license, which fact the inspectors shall require, when practicable, to be verified by the certificate, in writing, of the licensed master or pilot under whom the applicant has served, such certificate to be filed with the application of the candidate.

155.20 ***Inland mates of bays, sounds, and lakes other than the Great Lakes, steam or motor vessels.*** The following provision is, during the emergency,

applicable as alternative qualifying experience to that provided by §§ 36.6–2 and 96.32 of this chapter:

(*a*) Whenever any person presents himself for examination for license as made of inland steamers, the Merchant Marine Inspector in Charge shall examine him as to his knowledge, experience, and skill in loading cargo and in handling and stowage of freight, his knowledge of the operation and handling of fire apparatus, the launching and handling of lifeboats, his knowledge of life preservers and the method of adjusting them, his ability to manage the crew and direct and advise the passengers in case of emergency, and his general familiarity with his duties in maintaining discipline and protecting the passengers, and if found qualified he shall grant him a license as such, but no such license shall be granted to any person who has not had at least 2 years' experience in the deck department of a steam vessel, sail vessel, motor vessel, or barge consort, 6 months of such service to have been in a steam or motor vessel.

155.23 *Experience required for license as pilot, bays, sounds, and lakes other than the Great Lakes.* The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.6–3 and 96.35 of this chapter:

(*a*) No original license for pilot of any class shall be issued to any person who has not served at least 2½ years in the deck department of a steam vessel, motor vessel, or sail vessel, 1 year of which experience must have been obtained within the 3 years next preceding the date of application for license, which fact the inspectors shall require, when practicable, to be verified by the certificate, in writing, of the licensed master or pilot under whom the applicant has served, such certificate to be filed with the application of the candidate.

155.28 *Chief engineer of motor vessels.*[4] [5] [10] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–14, 36.4–9, 36.5–9, 36.6–9, 36.7–9, 62.55, 63.1a, 78.48, 96.47, and 115.48 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank of capacity	While holding a license as—
6 months. or	Motor	Engine department of any waters.	First assistant engineer	First assistant engineer.
1 year	do	do	Second assistant engineer	Do.
or				
3 months. or	do	do	Qualified member of the engine department.	Chief engineer steam.
1 year [11] or	do	do	Any capacity	
6 months [11] plus		Construction, installation, or repair of marine engines. plus		
6 months	Motor	Engine department of any waters.	Any capacity	

[11] For chief engineer of motor vessels of not more than 500 horsepower.

155.29 *First assistant engineer of motor vessels.*[4] [5] [10] The following provisions are, during the emergency, applicable as alternative qualifying experience to

[4] See footnote on p. 79.
[5] See footnote on p. 79.
[10] Commensurate with the experience of the applicant the inspector shall designate upon the license the limit of horsepower of vessel upon which he may act, and the Merchant Marine Inspector in Charge shall use "Merchant Vessels of the United States" as a guide in determining such horsepower.

that provided by §§ 36.3–15, 36.4–9, 36.5–9, 36.6–9, 36.7–9, 62.56, 63.1a, 78.49, 96.48, and 115.49 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months	Motor.	Engine department of any waters.	Second assistant engineer	Second assistant engineer.
or				
1 year	do	do	Third assistant engineer	Do.
or				
3 months	do	do	Qualified member of the engine department.	First assistant engineer steam.
or				
18 months[11]	do	do	do	
or				
1 year [12]	do	do	Any capacity	
or				
6 months [13]		Construction, installation, or repair of marine engines.		
plus		plus		
6 months	Motor.	Engine department of any waters.	Any capacity	

[13] For first assistant engineer of motor vessels of 1,500 horsepower.
[12] For first assistant engineer of motor vessels of 750 horsepower.

155.30 *Second assistant engineer of motor vessels.*[5 6 7] The following provisions are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–16, 36.4–9, 36.5–9, 36.6–9, 36.7–9, 62.57, 63.1a, 78.50, 96.49, and 115.50 of this chapter:

Length of service required	Vessel	Trade or other employment	Lowest rank or capacity	While holding a license as—
6 months	Motor	Engine department of any waters.	Third assistant engineer	Third assistant engineer.
or				
3 years	do	do	2 years as, or in a position equivalent to a qualified member of the engine department.	
or				
3 years [14]		Apprentice to machinist trade.		
plus				
6 months	Motor	Engine department of any waters.	Any capacity	
or				
3 months	do	do	Qualified member of the engine department.	Second assistant engineer steam.
or				
Graduation		Mechanical, marine, or electrical engineering from duly recognized school of technology.		
plus		plus		
6 months		Engine department of any waters.	Any capacity	
or				
Graduation		U. S. Naval Academy or U. S. Coast Guard Academy.		
or				
Graduation including 2 years.		Engineering class of a State nautical school ship.		

[14] 6 months of which time shall have been engaged in the construction, installation, or repair of marine engines.

[4] See footnote on p. 79.
[5] See footnote on p. 79.
[10] See footnote on p. 82.

155.31 *Third assistant engineer of motor vessels.*[4] [10] The provisions in section 155.9, *Third assistant engineer of ocean and coastwise, Great Lakes, bays, sounds and lakes other than the Great Lakes, or river, steam vessels* are, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.3–17, 36.4–9, 36.5–9, 36.6–9, 36.7–9, 62.58, 63.1a, 78.51, 96.50, and 115.51 of this chapter.

155.32 *Experience required for license as pilot, rivers.* The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.7–3 and 115.34 of this chapter:

(*a*) No original license for pilot of any class shall be issued to any person who has not served at least 2½ years in the deck department of a steam vessel, motor vessel, or sail vessel, 1 year of which experience must have been obtained within the 3 years next preceding the date of application for license, which fact the inspectors shall require, when practicable, to be verified by the certificate, in writing, of the licensed master or pilot under whom the applicant has served, such certificate to be filed with the application of the candidate.

155.34 *Inland mates of rivers, steam or motor vessels.* The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.7–2 and 115.31 of this chapter:

(*a*) Whenever any person presents himself for examination for license as mate of inland or river steamers the Merchant Marine Inspector in Charge shall examine him as to his knowledge, experience, and skill in loading cargo and in handling and stowage of freight, his knowledge of the operation and handling of fire apparatus, the launching and handling of lifeboats, his knowledge of life preservers and the method of adjusting them, his ability to manage the crew and direct and advise the passengers in case of emergency, and his general familiarity with his duties in maintaining discipline and protecting the passengers, and if found qualified he shall grant him a license as such, but no such license shall be granted to any person who has not had at least 2 years' experience in the deck department of a steam vessel, sail vessel, motor vessel, or barge consort, 6 months of such service to have been in a steam or motor vessel.

155.35 *Licenses to officers of vessels owned by the United States.* The following provision is, during the emergency, applicable as alternative qualifying experience to that provided by §§ 36.1–19, 62.15, 78.15, 96.15, and 115.15 of this chapter:

(*a*) Any person who has served at least 6 months as master, commander, pilot, or engineer of any steam vessel owned and operated by the United States in any service in which a license as master, mate, pilot, or engineer was not required at the time of such service, shall be entitled to license as master, mate, pilot, or engineer, if the inspectors, upon written examination, as required for applicants for original license, may find him qualified: *Provided*, That the operating experience of any such applicant has been such as to qualify him to serve in the capacity for which he makes application to be licensed.

PART 156—INSPECTION AND CERTIFICATION

Sec.
156.1 Definition of terms.
156.2 Drydocking of tank vessels navigating fresh water exclusively.
156.3 Electrical installations.

156.1 *Definition of terms.* Certain terms used in the regulations of this part are defined as follows:

(*a*) *Emergency.* The term "emergency" means the Unlimited National Emergency proclaimed by the President on May 27, 1941.

156.2 *Drydocking of tank vessels navigating fresh water exclusively.* The provisions of § 31.3–7 (a) (3) of this chapter, which require that tank vessels used in fresh water service exclusively shall be drydocked or hauled out at least once in every 5 calendar years, are hereby suspended for the duration of the emergency.

156.3 *Electrical installations.* The following provisions are, during the emergency, applicable as alternative provisions to those contained in §§ 32.6–1 to 32.6–5, inclusive, 63.9, 79.9, 97.11, and 116.16 of this chapter:

(*a*) The type of electric wires and cables to be used in the various parts of all vessels constructed after October 1, 1942, may be in accordance with "Accept-

[4] See footnote on p. 79.
[10] See footnote on p. 82.

able Substitute Specifications For Shipboard Cable, Wires and Cables—Construction and Applications, Modification of A. I. E. E. Standards No. 45, For the Duration of the National Emergency, sections 18, 19, 20, and 21," dated September 14, 1942, copies of which are available on request to the Commandant. Repairs, alterations, or extensions to the electrical wire or cable installations on existing vessels may be made in accordance with the provisions of this section for new construction.

PART 159—STORAGE OF HIGH EXPLOSIVES ON TANK VESSELS; REGULATIONS DURING EMERGENCY

Sec.
159.1 Definition of terms.
159.2 Authorization.
159.3 Storage of high explosives.
159.4 Storage of small-arms ammunition.
159.5 Care of ammunition.
159.6 Construction of magazines.

159.1 *Definition of terms.* Certain terms used in the regulations of this part are defined as follows:

(*a*) *Emergency.* The term "emergency" means the Unlimited National Emergency proclaimed by the President on May 27, 1941.

159.2 *Authorization.* Armed tanker vessels of the United States may accept, transport, carry, convey, store, stow or use such high explosives as are necessary for such armament when said high explosives are accepted, transported, carried, conveyed, stored, stowed, or used in accordance with the provisions of §§ 159.3 to 159.6, inclusive.

159.3 *Storage of high explosives.* Magazines shall be provided on board the vessel for the storage of high explosive ammunition (either fixed or separate loaded). Magazines may be located in a dry cargo space or a poop or forecastle space not utilized for crew quarters. The maximum separation possible shall be maintained between any magazine and any space allotted to the use of crew or persons other than crew. Magazines shall not be constructed in bearing with the collision bulkhead nor with a bulkhead forming a boiler room, engine room, coal bunker, or galley boundary. If it is necessary to construct such magazines in proximity to these bulkheads, a cofferdam space of at least 4 feet shall be provided between the bulkhead and the magazine side. Consistent with the above restrictions, magazines shall be constructed in locations selected by the Navy Department. A "ready" supply of shells may be stowed in "ready boxes" on deck adjacent to the gun mount. These "ready boxes" shall be as provided by, or constructed to a design furnished by, the Bureau of Ships, Navy Department.

159.4 *Storage of small-arms ammunition.* Small-arms ammunition having all the component parts necessary for one firing, all in one assembly, may be stowed in boxes or lockers in a location adjacent to the gun mounts, such location to be selected by the Navy Department. Boxes or lockers for the stowage of small-arms ammunition, shall be as provided by, or constructed to a design furnished by the Bureau of Ships, Navy Department.

159.5 *Care of ammunition.* The loading, stowage, handling, and use of all ammunition intended for the guns mounted on the vessel shall be under the control of the commander of the armed guard or other representative of the Navy Department.

159.6 *Construction of magazines.* Magazines shall be constructed in accordance with specifications furnished by, or approved by, the Bureau of Ships, Navy Department.

PART 160—HULL CONSTRUCTION, ALTERATIONS

Sec.
160.1 Hulls of tank barges.

160.1 *Hulls of tank barges.* The provisions of § 32.2–1 of this chapter, insofar as they apply to material, are hereby suspended to permit approval of the construction, conversion, and certification of tank barges, the hulls of which are constructed of materials other than iron or steel, for use in the transportation of inflammable and combustible cargo in bulk for a period not to extend beyond the state of national emergency proclaimed by the President on May 27, 1941.

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EQUIPMENT APPROVED BY THE COMMANDANT

The following items of equipment for the better security of life at sea have been approved by the Commandant, United States Coast Guard, and published in the Federal Register for November 17, 1942, and November 21, 1942.

Lifeboats.

Hugo Manufacturing Co., Duluth, Minn., 22'0" x 6'6" x 3'0", 22-person metallic lifeboat (General arrangement drawing No. H–1, dated May 8, 1942).

Frank Morrison and Son Co., Cleveland, Ohio, 24'0" x 7'9" x 3.33', 37-person metallic lifeboat (General arrangement drawing No. 24–37).

Neptune Boat & Davit Co., Inc., New Orleans, La., 22'0" x 7'6" x 2'9", 24-person metallic lifeboat (General arrangement drawing No. LB–24–P, Sheet No. 1, Rev. September 19, 1942).

Life rafts.

Moore Lumber Co., Galveston, Tex., 18-person catamaran type life raft (drawing No. 1).

Wm. H. Sands, Inc., Towson, Md., 20-person life raft (drawing No. R–566, Rev. September 20, 1942).

Walker Boat & Raft Co., New Orleans, La., 16-person life raft, type WBD–517 (drawing No. WBD–517, dated September 22, 1942).

Life preservers.

Elvin Salow Company, Boston, Mass., Navy standard adult kapok life preserver (drawing No. WLP–1, dated October 5, 1942), Approval No. B–171.

Signal pistol.

Van Karner Chemical Arms Corp., New York, N. Y., V–K, Mark 12, parachute signal pistol (drawing No. S–100, dated October 16, 1942, Rev. October 30, 1942).

Chemical heating pads.

Bauer & Black, Chicago, Ill., Thermat chemical heating pad.

Rose-Derry Co., Newton, Mass., Lightningpak, chemical heating pad.

Daytime distress signals (smoke signals).

Coston Supply Co., New York, N. Y., Coston day floating smoke signal.

Hand distress signals.

Samuel Jackson, Jr., Laurel Springs, N. J., ship signal flare hand distress signals, 1¼-inch diameter.

Thread for life preservers.

Franklin Thread Co., New York, N. Y., Arcola Brand, No. 10/3, silk finish cotton thread.

APPROVAL NUMBERS FOR STANDARD LIFESAVING DEVICES

Approval numbers have been assigned to standard lifesaving devices of manufacturers in accordance with the following list, under the applicable provisions of regulations for inspected vessels prescribed by the Commandant, United States Coast Guard, or section 28.4–1 of the General Rules and Regulations for Motorboats and Certain Vessels Propelled by Machinery Other Than by Steam More Than 65 Feet in Length, which supplements the lists appearing in previous BULLETINS.

Manufacturer and type of lifesaving device	Approval number
Muskin Manufacturing Co., Inc., 104 Ashland Pl., Brooklyn, N. Y.	
Standard adult kapok life preserver	A-239
Matson Navigation Company, 480 Main St., San Francisco, Calif.	
Standard adult cork life preserver	A-240
Standard child cork life preserver	A-241
Standard adult balsa wood life preserver	A-242
Standard child balsa wood life preserver	A-243
Standard adult kapok life preserver	A-244
Standard child kapok life preserver	A-245
Lisson-Melen Co., Lynn, Mass.	
Standard adult kapok life preserver	A-246

ITEMS EXAMINED BY MERCHANT MARINE INSPECTION SECTION AND FOUND SUITABLE FOR MARINE USE

Electrical Appliances

Hand lanterns.

Justrite Manufacturing Co., 2061 North Southport Avenue, Chicago, Ill., electrical hand lanterns, Nos. 44–S, 42–S, and 40–S (for use in pump rooms of tank vessels).

Bells.

Stanley & Patterson, Division of Schwarze Electric Company, Adrian, Mich., 6-inch watertight vibrating bell, electric, A. C. and D. C. (115 volts maximum) (drawing No. W. A. and W. T. A., dated 9–9–42, no alteration).

Sound powered telephone equipment.

United States Instrument Corp., East Orange, N. J., sound powered handset assembly, Type 333, Dwg. No. A–257 (no alteration).

Welding Process

Submerged melt electric welding process.

Southwest Welding & Manufacturing Co., Alhambra, Calif., certificate No. SM–12.

Affidavits Filed

Pressure regulators and strainers.

Boylston Steam Specialty Co., Chicago, Ill.

Bronze and steel castings.

Northwest Steel Casting Co., Bellingham, Wash.

Forged steel pipe flanges.

Klamath Machine & Locomotive Works, Klamath Falls, Oreg.

Certifications of Articles of Ships' Stores and Supplies

The following article of ships' stores and supplies has been certificated for use on board vessels in accordance with the provisions of part 147 of the regulations governing "Explosives or Other Dangerous Articles on Board Vessels," and supplements the list previously published.

Certificate No.	Certificate date 1942	Product	Name of company
164	Nov. 9	Gamlen Sea Suds	Gamlen Chemical Co., Pittsburgh, Pa.

AMENDMENTS TO THE INSPECTION AND NAVIGATION REGULATIONS

There was published in the Federal Register during the period from October 17 to November 17, 1942, the following enumerated material which concerned the activities of the Coast Guard. Reprints are not available for distribution to the public but copies of the Federal Register are obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C.

Publication date	Subject	Title and parts amended
Oct. 21	Transportation of military explosives on board vessels during the present emergency, corrections to amendments published October 3, 1942.	Title 46, part 146.
Oct. 23	Anchorage areas, regulations for security of ports and the control of vessels in the navigable waters of the United States.	Title 33, part 6.
Oct. 24	Correction in regulations for security of ports and control of vessels in navigable waters published October 10, 1942.	Do.
Oct. 31	Order establishing a merchant marine inspection office at Ludington, Mich., and correcting order published October 17, 1942.	None.
Nov. 3	Amendments to regulations regarding enemy aliens for security of ports and control of vessels.	Title 33, part 6.
Nov. 17	Amendments to emergency regulations and approval of lifesaving appliances.	Title 46, parts 153, 155, 156.

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